

**THE
TENNESSEE
AUTOMOTIVE
INDUSTRY**



THE TENNESSEE AUTOMOTIVE MANUFACTURING SECTOR

The Southeast has emerged as the driving force in automotive manufacturing in the United States, and Tennessee is its engine.

The Volunteer State's automotive manufacturing cluster includes three major assembly operations – General Motors in Spring Hill, Nissan in Smyrna and Volkswagen in Chattanooga – as well as a growing roster of Tier 1 and Tier 2 suppliers. In addition, Nissan maintains its North American headquarters in Franklin.

Business Facilities magazine named Tennessee the top state in its Automotive Manufacturing Strength ranking for 2013, for the fourth consecutive year. The automotive sector employs 111,000 workers at over 900 establishments and accounts for one in three manufacturing jobs in Tennessee.

The state offers a number of advantages that favor automotive manufacturing investment:

- ◆ Tennessee is home to 6.5 million people, and 30.8 percent of the state's population 25 years and older has an associate degree or higher.
- ◆ The Tennessee Board of Regents (TBR) system consists of six state universities, 13 community colleges and 27 colleges of applied technology (TCATs) with a combined annual enrollment of over 200,000 students, making it among the nation's largest systems of public higher education. The TBR system is a \$2.2 billion per year enterprise. Tennessee's 35 independent colleges and universities brought 2013 statewide enrollment to over 390,000 students.
- ◆ The state's 27 TCATs provide certificate and diploma programs in over 50 distinct occupational fields, as well as customized training for

business and industry. Many of the TCATs offer automotive-related programs, including machine tool technology, welding technology and mechatronics.

- ◆ Tennessee offers labor skilled in automotive processes. The Nissan plant in Smyrna, for example, is the most productive plant in the U.S. in 2014, producing an average of 55,000 automobiles per month according to *Automotive News* research.
- ◆ The state offers access to a growing roster of engineering talent. Engineering completions in Tennessee have increased by 25 percent between 2007 and 2012.
- ◆ Multiple interstate systems and railways allow close access for proximate supplier-to-supplier and supplier-to-OEM relationships.

The automotive industry has been critical to the success of the state's overall economy, particularly its manufacturing sector, and has contributed to significant employment gains coming out of the recession.

A 2013 Brookings Institution study showed the Tennessee automotive

sector touched virtually every corner of the state, with 80 of the state's 95 counties having automotive operations. The study also indicated Tennessee has the largest concentration of automotive industry employment in the South. The automotive cluster in Tennessee is the dominant force in the state's advanced manufacturing sector, accounting for three out of four of the advanced manufacturing jobs created since 2010. Employment in the state's auto sector has grown 10 times faster than overall jobs in the state.

The presence of major assembly operations has been a catalyst for attracting foreign direct investment. Major Tier 1 suppliers from Japan, Germany, Canada, the United Kingdom and other countries have invested over \$19 billion in Tennessee operations.

Since 2011, OEMs and suppliers in Tennessee have committed to over 22,000 new jobs. Among the latest successes is South Korean tire manufacturer Hankook, which is building an \$800 million facility in Clarksville that will employ 1,800 workers. It is the company's first U.S. production facility.



RANKINGS

#1

For automotive manufacturing strength by *Business Facilities* magazine in 2013, the fourth consecutive year for the recognition

#4

State for automotive parts suppliers by *Business Facilities* magazine in 2013



CARS AND LIGHT TRUCKS MANUFACTURED AT TENNESSEE PLANTS

2012



573,361
(Seventh in nation, third in Southeast)

2013



668,692
(Seventh in nation, third in Southeast)

Source: *Automotive News, Data Center*

= 100,000

PRODUCTION LEADER

16.6%

Increase in production in Tennessee auto plants from 2012 to 2013

6.1%

Cars produced in the U.S. made in Tennessee in 2013

#5

Tennessee's rank among fastest-growing states for car and light truck manufacturing (2012-2013)

11

Number of models produced at Tennessee automotive plants

#1

Rank of Nissan's Smyrna plant among the most productive automotive operations in the U.S. (483,500 cars, trucks and SUVs in 2013)

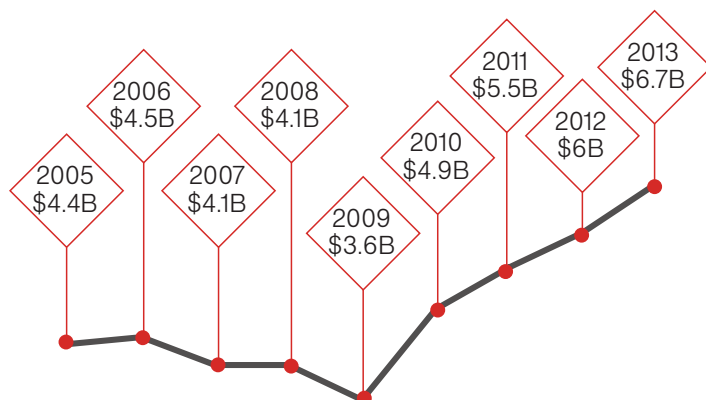
Source: *Automotive News, Data Center*

TENNESSEE WAGES BY INDUSTRY, 2013

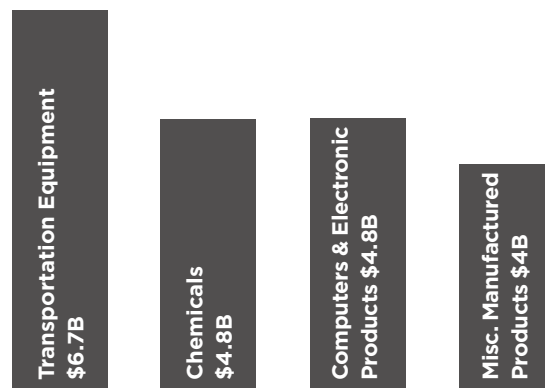
Industry	NAICS	Average Hourly Wage	Average Annual Wage
Motor Vehicle Manufacturing	3361	\$43.67	\$90,821
Motor Vehicle Body and Trailer Manufacturing	3362	\$17.85	\$37,113
Motor Vehicle Parts Manufacturing	3363	\$22.90	\$47,643
Tire Manufacturing	32621	\$29.57	\$61,496

Source: U.S. Bureau of Labor Statistics

TENNESSEE TRANSPORTATION EQUIPMENT EXPORTS



TENNESSEE'S MAJOR EXPORTS (2013)



TENNESSEE EXPORTS

20.6%

Transportation equipment exports as a percentage of total exports (2013)

#1

Tennessee's rank in the Southeast (sixth in nation) for exports of Motor Vehicle Parts

80%

Five-year growth rate of automotive-related exports (2008-2013)



KEY COMPONENTS (2013)

\$2.3B

Motor Vehicle Exports

\$63M

Motor Vehicle Bodies and Trailers Exports

\$2.9B

Motor Vehicle Parts Exports

LOCATION QUOTIENT FOR SELECTED INDUSTRIES IN TENNESSEE

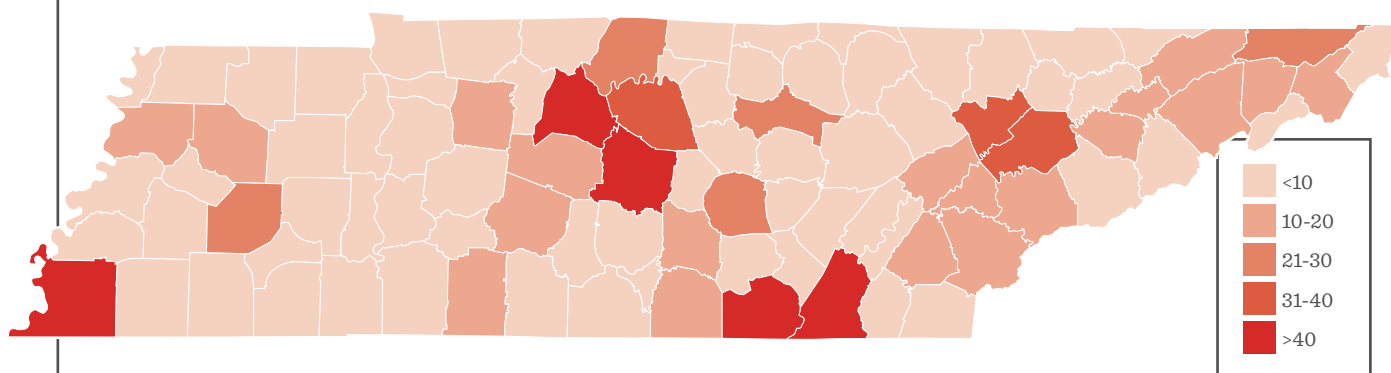
Industry	2013 Employment	2013 National Location Quotient*
Motor Vehicle Manufacturing (NAICS Code 3361)	10,763	2.89
Motor Vehicle Body and Trailer Manufacturing (NAICS Code 3362)	7,571	2.81
Motor Vehicle Parts Manufacturing (NAICS Code 3363)	35,989	3.49
Tire Manufacturing (NAICS Code 32621)	3,331	3.10

* A location quotient of 1 indicates the industry's employment share matches the national average; a location quotient greater than 1 indicates the industry makes up a larger share of the area's total employment than the national average.

Source: U.S. Bureau of Labor Statistics

AUTOMOTIVE CONCENTRATION IN TENNESSEE

There are 900 automotive manufacturers spread throughout Tennessee.



MAJOR AUTOMOTIVE EMPLOYERS IN TENNESSEE

① NISSAN NORTH AMERICA, INC.

9,000 employees
Smyrna, Decherd, Franklin

② DENSO MANUFACTURING TENNESSEE, INC.

3,800 employees
Maryville, Athens

③ BRIDGESTONE CORP.

3,500 employees
Nashville, LaVergne, Dickson, Morrison, Clarksville, Lebanon

④ CALSONIC KANSEI NORTH AMERICA, INC.

2,600 employees
Lewisburg, Shelbyville, Smyrna

⑤ VOLKSWAGEN OF AMERICA, CHATTANOOGA OPERATIONS, LLC

2,545 employees
Chattanooga, Lenoir City

⑥ GM SPRING HILL MANUFACTURING

2,410 employees
Spring Hill

⑦ HANKOOK TIRE CO., LTD.

1,800* employees
Clarksville

⑧ YOROZU AUTOMOTIVE TENNESSEE, INC.

1,300 employees
Morrison

⑨ ALCOA, INC.

1,200 employees
Alcoa

⑩ DUPONT

1,100 employees
New Johnsonville

⑪ M-TEK, INC.

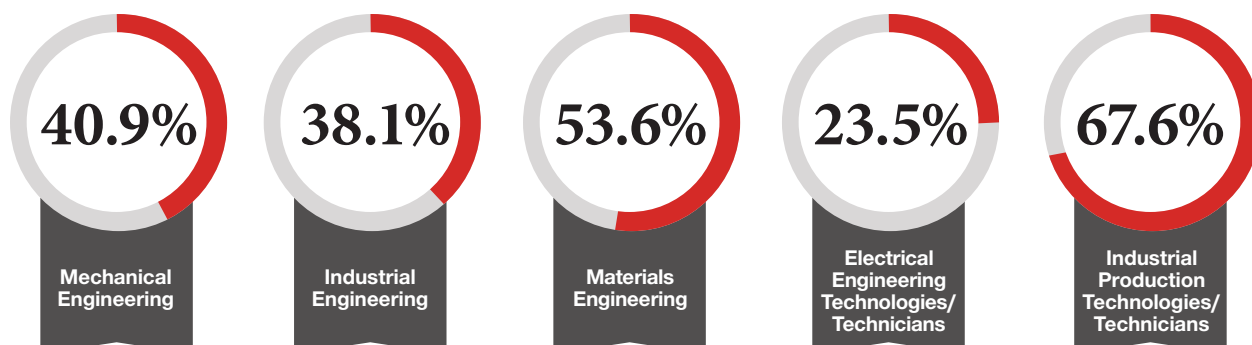
1,090 employees
Manchester, Chattanooga

*announced

Source: TNECD

ENGINEERING ACHIEVEMENT

Engineering program completions in Tennessee have increased by 25 percent over the last five years (2007-2012). Completions in engineering technologies and related fields have increased by 59 percent over the same time period.



Source: EMSI, IPEDS

**FDI IN TENNESSEE'S
AUTOMOTIVE INDUSTRY****\$14.6B**

Japan

\$2.07B

Germany

\$582M

Canada

\$308M

United Kingdom

\$2B

All Others

Source: TNECD

**TOP 10 AUTOMOTIVE COMMITMENTS BY NEW JOBS (2011 TO Q1 2014)**

Company	New Jobs	Capital Investment (\$)	Location	Date
GM Spring Hill Manufacturing	2,350	244,000,000	Spring Hill	November 2011
Hankook Tire Co., Ltd.	1,800	800,000,000	Clarksville	October 2013
Nissan North America, Inc.	1,400		Smyrna	October 2012
Calsonic Kansei North America, Inc.	1,200	109,612,000	Multiple Sites (Shelbyville, Lewisburg, Smyrna)	September 2013
Volkswagen of America, Chattanooga Operations, LLC	1,000		Chattanooga	March 2012
Nissan North America, Inc.	900		Smyrna	June 2013
Nissan North America, Inc.	800	325,000	Smyrna	January 2012
Magneti Marelli Suspension USA, LLC	800	53,700,000	Pulaski	June 2012
C & F Group	450	12,500,000	Kingsport	August 2011
NYX, Inc.	400	23,000,000	Linden	August 2011